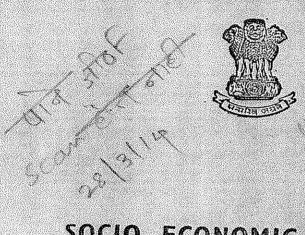


GOVERNMENT OF MAHARASHTRA



SOCIO-ECONOMIC STUDY OF BHOPALPATTANAM PROJECT IN GADCHIROLI DISTRICT (MAHARASHTRA STATE)

Tribal Research and Training Institute, 28, Queen's Gardén, Pune-411001. 1986



7 MA (TE)

For Office Use only

沙种种种种种的水种种的水种的水物的水物的水物的水物的水物的水物的物质的水物的水物物的水物的水物的水物的水物的水物的水物的水物的水物的水物物物的水物物

GOVERNMENT OF MAHARASHTRA

SOCIO-ECONOMIC STUDY OF

BHOPALPATTANAM PROJECT

IN

GADCHIROLI DISTRICT

(MAHARASHTRA STATE)

Tribal Research and Training Institute,
28, Queen's Garden,
Pune - 411 001

1986

PREFACE

The present study mainly deals with the sociocultural aspects of the tribal people along with the assessment of economic losses of public and private properties in the submergence area of proposed Bhopalpattanam Project in Aheri Tahsil of Gadchiroli district. Moreover, an attempt has been made to find out some ways and means for proper rehabilitation of the tribal people to be affected by the project with due consideration to preserve their ethnic identity.

The report on socio-economic study of Joint Bhopalpattanam project has been undertaken and completed by Shri D.M.Raskar, Research Officer, with the help of four local investigators appointed for the purpose, under my guidance.

I am thankful to the Officers of the Irrigation, Forest and Geology Department for providing available information for this study. I am also thankful to the Project Officer of I.T.D.P. Etapalli for extending his co-operation in the present study.

I am sure that this report and the suggestions made therein will be helpful to the authorities incharge of rehabi-litation work of the tribal people affected by the submergence of Joint Bhopalpattanam project.

(Dr.G.M.Gare)
Director,
Tribal Research & Training Institute,
Pune-1.

Place : Pune

Date :

CONTENTS

				Pages
Chapter	One	:	Introduction	1
Chapter	CwT	:	Objective, Methodology and Coverage of the Study	11
Chapter	Three	:	A general study of the project area	15
Chapter	Four	:	Major Tribal Groups in the Project Area	23
Chapter	F1 ve	:	Economic losses to the people in the project area	34
Chapter	Six	:	Economic losses of public properties in the project area	45
Chapter	Seven	:	Conclusions	54
Chapter	Eight	:	The Scheme of model rehabilitation of the displaced persons Some suggestions	59

CHAPTER - I INTRODUCTION

The Bhopalpattnam project is a Joint Hydel Project between Maharashtra and Madhya Pradesh States. The Dam site of the proposed project is located on the Indravati river which forms the boundary between Maharashtra and Madhya Pradesh. The Hydel Scheme across the Indravati river was first conceived in the year 1962 by Maharashtra and M.P.States, when they submitted their joint project report on Krishna Godavari Commission (Gulhati Commission).

agreement regarding full reservoir level as R.L.200.25 mtrs.

(i.e.657 feet) and Maximum Water Level (MWL) as R.L.201.16 mtrs.

(i.e.660 feet) in February,1973. In 1974, there was a further agreement between the two States that the cost and benefits of this Hydro project would be shared in the proportion of 45:55 by Maharashtra and Madhya Pradesh respectively. It was also decided that M.P.should investigate and prepare this project report and submit it to the Government of India after the approval of the two States. In August,1978 the dispute regarding sharing of Indravati waters (part of Godavari water dispute) between Orissa, M.P., Maharashtra and Andhra States and details of an agreement of Inchampalli project were settled. Thus, the way for this project and its exact scope was cleared up.

With the agreement on Inchampalli project, between
Maharashtra, M.P. and Andhra Pradesh, the idea of irrigating some
area of former Sironcha tahsil of Gadchiroli District of
Maharashtra and Bhopalpattanam tahsil of M.P. from Bhopalpattanam
project had to be given up, as the area being contemplated for
irrigation would now go under Inchampalli reservoir submergence.
Thus, this project has become a purely Hydro project. This
final picture of the project has also become part of the

discussion of the Godavari water disputes Tribunal Report in the year 1980.

In the 17th meeting of the Maharashtra, M.P. Inter-State Control Board for Joint Irrigation and Hydro projects held at Pune on 10th August, 1982, it was decided to minimise the distress caused to the people (mostly triballs) living in the submergence area of the project and they should be rehabilitated by providing housing, agricultural land and irrigation facilities as also to protect their cultural heritage. It was also decided that this socio-economic study should be allotted to the T.R.I. Pune as far as Maharashtra State is concerned.

Location of the Project and approach :

The Bhopalpattanam Dam site is located at an attitude 90°,3'.45' and Longitude 80°,19'.5". The site is about 9 kms. away from Dechali village in Aheri tahsil of Gadchiroli district in Maharashtra and 32 kms.away from Bhopalpattanam town in Bastar District of M.P. (after which the project is named). The Indravati river - on which the dam is proposed - forms boundary between Maharashtra and M.P. Village Dechali is approachable in fair season only from Gimalgatta which is on State Highway from Ballarpur to Sironcha (i.e. 8 H No. 7 B). However, a road of State Highway standard is under construction for approach to Dechali village under Public Works and Housing Department, Chandrapur. The length of this Highway is about 24 kms.upto Dechali. Out of this 24 kms.length, first eight kms.from Jimalgatta has been completed as W.B.M.surface with cross drainage works and the further length of 16 kms.is under Since 1982, a sum of Rs.30 lakhs has been spent construction. The nearest railway station to the project is on this work. Ballarpur which is about 225 kms.from the Dam site. The project area is located in a dence forest clad and in an under-developed

regions of Maharashtra and M.P. and suffers from poor communica--tion facilities. At present, there does not exist approach roads or even cart tracks leading to the Dam site directly.

Project at a glance :

To all

The main works involved in the project are :-

- (a) A masonary dam 91.65 mtrs high above river bed level (non over flow 387.67 mtrs.in a total length of 569.17 mtrs.)
- (b) An underground power house on left bank 237 mtrs.length to accommodate 8 units of 125 M.W.each, with space left for about 3 units to accommodate further future expansion by conventional turbines/reversible turbines/pumping back capacity to increase the much needed peaking power to the States of Maharashtra and M.P.

In the initial phase a power generation of 285 M.W.firm power estimated with installed capacity of 1000 M.W.(load factor 28.5%).

Bhopalpattanam dam is the terminal dam on Indravati river. An agreement has been reached on the Inchampalli dam (F.R.L.370 ft.) on Godawari river between Maharashtra, M.P. and Andhra States. The reservoir water of Inchampalli backs upto Bhopalpattanam dam site. The agreement also provides that Maharashtra and M.P. may introduced pumped storage schemes in their joint Bhopalpattanam Hydro Electric project at any stage, without any obligation to maintain any specific level at any time at the Inchampalli reservoir.

The project is estimated to cost Rs.402.94 Crores as per the details below :-

		<u>Item</u>	Rs.Crores
1) Unit	I -	Dam and appurtenant works	121.01
2) Unit I	I -	Power House, Switch Yard and	
		Transmission lines etc.	281,93
		Total	402.94

The project is programmed for construction in 7 years including one pre-construction year (total 8 years). On completion, the project will -

- (a) generate 285 M.W. of firm power
- (b) provide peaking power to the extent of 1000 M.W.at a rate of Rs.4,000/- per km.of installed capacity.
- (c) provide annual gross revenue of Rs.51.14 crores.
- (d) give a return of 10.58% at the end of 10 years after completion of the project.

Salient features of the project

Location :

- 1) States : Madhya Pradesh/Maharashtra
- 2) Districts : Left flank of the dam and Power House is located in Baster Dist.of M.P. and right flank is located in Aheri tahsil of Gadchiroli district.
- 3) Latitude : 19° .3' 45"
- 4) Longitude : 80° 13' 5"
- 5) River : Indravati
- 6) Situation : Bhopalpattanam dam is situated 9 kms.away from Mettimarka village in Bijapur taksil of Baster district in M.P. The site is about 31 kms.away from Bhopalpattanam and is approachable by forest road. However, the town Bhopalpattanam is connected by metaled road.

	Hydrology	C.C.S.Un	<u>1 t</u>	P.P.S.Uni	<u>t</u>
1)	Catchment area upto dam site	37,933.14	sq.kms.	14,646.00	sq. miles
	(a) N.P.	26,174.54	Ħ	10,106.00	11
	(b) Crise	7,226.1	11	2,790.00	n
	(c) Maharashtra	4,532.50	Ħ	1,750.00	**
2)	Maximum annual rain-fall (1944)	2,354.58	mm.	97.70	inches
3)	Minimum annual rain-fall (1972)	496.00	n	19.59	a .
4)	Average annual rain-fall (1943 to 1976)	1,495.00	**	57.95	11

•			
	Hydrology	C.C.S.Unit	P.P.S.Unit
5)	Design and flood	50,636 cusec	17,893 Lakh cusec
6)	Actual observed maximum) flood at Pathagudam gauge) and discharge site (1959))	16,408 MCM	13,297 MAF
7)	Available run off at Bhopalpattanam from (1943 to 1976)		1
	(a) 50% dependability	19,490 MCM	15.80 MAF
	(b) 75% dependability	14,800 MCM	128.00 MAF
	(c) 90% dependability	9,868 MCM	8.00 MAF
·	(d) Reservation for upstreamuse	m 1,234 MCM	1.00 MAF
	(e) Upto Bodhghat between Bodhghat and Bhopalpattanam	6,499 MCM	5,267 MAF
	Reservoi	n Doto	
7)	Maximum water level	*	222 22 21
	Full reservoir level	201.160 mtrs.	660.00 fts.
		200.254 mtrs.	657.00 fts.
	Dead storage level	176.48 mtrs.	579.00 fts.
	River bed level	112.56 "	369.25 fts,
	Water spread at F.R.L.	71,174 Ha.	1,75,870 "
	Gross storage at F.R.L.	9,494 MCM	7.69 MAF
	Dead Storage	1,073 MCM	0.970 MAF
8)	Liver störage v 1	8.422 MCM	6.82 MAF
9)	Maximum flood water level	142.12 mtrs.	466.28 fts.
10)	Tahsils in which sub-) Bij mergence area lies) Eta	apur in M.P.and palli in Maharas	Aheri and htra.
11)	No. of villages affected (M.S	.) - 88	
12)	No. of persons displaced - (M	(.S.) - 13,419	
13)	Total area submerged at F.R.L.657 for Bhopalpattanam	- (M.S.) 425 sq	.metres
	(* M.S. = Maharashtra	State)	
	Top of the dam (level	204.21 mtrs.	670.00 fts.
		183.49 mtrs.	602.00 fts.
	•		

c) Four	ndation level	106.56	mtrs.	349.52	ftsc.
d) Max leve	imum height upto road el above foundation	97.65	t i	320.43	fts.
e) Max abo	lmum height upto crest ve foundation	76.93	m	252.48	11
f) Len	gth of spillway	387.67	11	1271.95	11
g) No.	& size of crest gates	17	Nos.	17	Nos.
		18.266	mtrs.	60' x 58	5 1
		16.764	mtrs.		
14) Non-Ov	erflow Dam :	, A		•	
a) Len dam	gth of non-overflow .	181.50 r	ntrs.	595.50	fts.
	imum height above ndation	60.22	11	197.58	t#
15) <u>Power</u>	Dam :				1.4
a) Top	of the dam -	Power How undergrow left bank	und in s	be loca Cavern	ated on
b) No.	& size of penstock-	l No. 7. diamet		23.78 f	ts. es
e) Max thr	imum discharge ough the penstock	186.62 c	usecs	6586 cu	secs
	Power	•			i i i
a) No. to	& size of units - be installed	8 units 125 MW a for 3 un reversib	nd space its of 7	e provide	of ed
b) Typ	e of turbine -	Francis expansio		s for fu	ture
e) Ins	talled capacity -	1,000 M.	W.		
	d (Range of - ration)	90.55 mt 66.78 mt	rs.297 f rs.218.9	ts.to 94 fts.	
16) <u>Power</u>	Developments :				
a) Con	tinuous (firm) -	285 MW			
b) Sec	ondary -	-			•
17) <u>Estima</u>	ted cost :				
a) Uni	t I Dam -	Rs.12,10	l Lakhs		
b) Uni	t II and III power-	Rs.28,19	3 lakhs		

- c) Cost per K.W.or installed capacity Rs.40,294.00 lakhs
- 18) Benefits:
 - a) Annual (gross revenue from sale of power)
- Rs.5114 Lakhs

19) Financial Returns :

Percentage return at the end of 10 years after completion of construction

- Rs.10.58 Lakhs.

Need of the project and its place in overall planning :

The Bhopalpattanam Hydel Project is one of the projects in advanced stage of investigation and fits, not only in the development of hydel power in Indravati valley, but also in the overall development of Maharashtra and M.P.States. M.P. State at present is difficient in hydel power for optimum operation and peaking power is an urgent necessity of the state. Besides, this project benefits Maharashtra in urgent need of hydel power for peaking purposes. Additional space has been provided for further expansion either by for conventional units or for reversible units.

Selection of the site for the Dam:

At the proposed dam site, the river Indravati flows through a comparatively narrow gorge held between high rocky hill ranges on the border of Maharashtra and M.P.Stages. The width of the gorge is not sufficient to accommodate both the spillway and the power dam. Therefore, the location of the dam site necessitates the location of power house underground on the left bank of Indravati river.

Villages coming under submergence area of Bhopalpattanam project along with their population and geographical area as per 1981 Census are given in Table No.1.1 below:-

Table No. 1.1

List of villages from Aneri Tahsil coming under the submergence area of Bhopalpattanam Project.

-		<u> </u>	<u> </u>	F 10 15	and the state of	
S. No.	Name of village	C No. (1981)	Area in Ha.(as per	Cens: Total	ion 1981 us Tribal	Major tri- bes in the village
-1	· ************************************	<u>``</u>	<u>1981 cc)</u>	5	6	7
				• • • • • • • • • • • • • • • • • • •		
		<u>Full</u>	y covered	<u>l villages</u>	•	
1.	Akera	Included	in Kurump	alli (c.c.	.413)	
5.	Aldandi	360	222.03	151	146	Madia
з.	Arenda	359	1657.08	244	199	"
4.	Asha	438	46.10	94	88	ŧŧ
5.	Brahmanpall	1 418	1233.19	€17	117	Madia,Gond
6.	Baseguda	Included	in Echli	(c.c.No.4]	L7)	
7.	Bhangarampe	ta 441	1370.68	468	449	Gond, Madia,
8.	Chandra	327	931.52	463	434	Pardhan Madia,Gond
9.	Chandampall	i 358	1121.96	185	181	Ħ
10.	Chintareu	Included	in Chitwe	li (c.c.No	.442)	
11.	Chitweli	442	12.04	67	58	Media, Gond,
12.	Damrecha	421	1042.84	869	438	Fardhan
13.	Dubaguda	420	893.36	19	19	Madia
14.	Echli	417	2243.25	816	163	Madia,
15.	Garewada	443	0.20	14	6	Mannewar Halba
16.	Gatepalli	297	82.60	163	163	Madia
17.	Gurja Kh.	389	1140.00	. 44	44	Madia
18.	Jonawahi	419	33.84	59	59	Gond
19.	Kachler	295	85.45	92	92	Madia
20.	Kodekasa	414	447.72	13	13	Madia
21.	Kodeepalli	424	1416.79	301	257	Ħ
22.	Koreli Bk.	296 2	2238.23	502	350	Madia,Gond
23.	Kurumpalli	413	1430.28	550	4.80	Madia
24.	Lankelguda	Included	in Echli	(c.c.No.4	17)	
25,	Madveli	386 J	L058.78	239	232	Gond, Madia

na ang katalang kanalang ang katalang kanalang ang kanalang tagan kanalang kanalang ang kanalang kanalang kanal

						:	
1	2	3	4	5	6	7)
26.	Mandra	422	1135.45	568	464	Gond,	
27.	Mannerajaram	416	820.36	714	617	Mannéw Gond ,E	
28.	Marampalli	385	1287.48	216	193	Gond	•
29.	Micheguda	355	22.92	41	41	Madia	
30.	Modumadga	446	13.64	51	34	Madia	
31.	Mokela	364	49.54	141	141	Madia	
32,	Nainer	411	62.87	106	106	Madia	٠.
33.	Naigudam	439	26.56	88	88	Gond	
34.	Palley	362	1933.45	209	206	Madia	
35.	Palekasa	Incl	uded in Ko	deepalli	(c.c.No.4	24)	
36.	Parli	415	50.87	49	42	Madia	
37.	Parimili	328	956.91	836	463	Gond	
38.	Rapelli	363~	86.21	224	555	Madia	
39.	Ragiguda	Incl	uded in Ec	hli (c.c.	No.417)		
40.	Rela	384	353.27	66	64	Madia,	Gorvar
41.	Sipanpalli	387	1591.72	143	141	Madia	
42.	Tonder	440	27.16	92	92	Madia,	Gond,
43.	Yermaner	388	2082.32	458	347	Pardha Madia	n.
	Total		29,208.67	9,972	7249		
	Partly	<u>affec</u>	ted villag	es from A	heri Tahs	11	
1.	Kandoli	240	2504.98	982	791	Madia	•
2.	Koreli Kh.	329	1193.49	133	133	Madia	e e
**************************************	Total	·	3,698.47	1,055	924	and the second s	-tanjar sijijahidippi distro sitrositari
	Grand Total o Aheri Tahsil		32,907.14	11,027	8,173		

List of villages from Etapalli Tahsil coming under Submergence

S. No.	Village	C.C. 198			ation (1981 Tribal	Major Tribes
	un municipality suspensiva managar managar daraksi				as weeks was a state of the sta	in the village
	.·	<u>Fully</u>	covered vil	<u>lages</u>		
1.	Boria	368	863,67	147	147	Gowari
2.	Chinchoda	366	889.52	294	291	Halba
з.	Gurnur	365	25.43	110	110	Gond
4.	Jhareguda	370	5.97	16	16	Jaraka
5.	Kasansur	369	663,94	141	140	Madia
6.	Palli	322	929.97	324	312	Halba,
	,	·				Gond, Gowari
<u>-</u>	Total		3378.50	1032	1016	
		Partly	covered vi	llages		:
1.	Botanfundi	274	1079.78	205	196	Mad i a
2.	Jinjgaon	367	1136.48	354	, 333	Gond
з.	Kedmarra	325	2.05	. ••••		
4.	Koyanguda	321	18.84	127	127	Halba,
5.	Kudkeli	298	1947.82	381	300	Madia Madia
6.	Partampalli	324	1067.28	107	107	Madia
7.	Wateli	74	921.03	186	183	Madia, Gond
						Gowari
	Total		6173.28	1360	1246	
*****	Grand Total Etapalli	of	9551.78	2392	2262	are entertain entertain ellemente thinken ellemente the N
	Grand Total AHERI AND ET Tahsils		42458.92	13419	10435	

CHAPTER - II

OBJECTIVES, METHODOLOGY & COVERAGE OF THE STUDY

As stated earlier, in the 17th meeting of the Maharashtra and M.P.Interstate Control Board for Joint Irrigation and Hydel Projects, held at Pune on 10th August, 1982, it was decided that the socioeconomic survey of the tribal people in the area under-going submergence of Bhopalvattanam project should be allotted to the T.R.I.Pune. Accordingly, vide Govt.letter No.BPT-1082/495/ND, dated 4th October, 1982 from the Irrigation Department, T.R.Institute, Pune, has been saddled with the responsibility of conducting Eco-sociological Survey of lands and tribal people under submergence area of joint Bhopalpattanam project.

While undertaking the present study in hand, following objectives were kept in view:-

- (1) To take sociological study of people and area under submergence of Joint Bhopalpattanam project.
- (2) To assess value of economic losses of the area due to submergence.
- (3) To protect cultural heritage, preserve ethnic identity of tribal people in the area and to prevent their ethnocide.
- (4) To find out the means and ways of proper rehabilitation of the people which will minimise the distress to the people by providing them the basic amenities like housing and agricultural lands etc.
- (5) To assess views of the local people regarding the project itself.

These main objectives of the study consist of many other points such as collection of family details of each family and extent to which it is likely to be affected, impact of shifting them from the present area to other places making them landless, inventory of resources for their rehabilitation,

reliefs to be granted to them for their lands and study of area in the vicinity of the project etc.

Study Area:

In all 58 villages from Aheri and Etapalli tahsils of Gadchiroli district are the main area of the present study. Out of these 58 villages, 49 villages are fully affected while remaining 9 villages are partly affected villages. Tahsilwise break-up of fully and partly affected village is given in the following table:-

Table No. 2.1

Table showing Tahsilwise No. of fully and partly affected villages under submergence area of Joint Bhopalpattanam project.

S.No.	Name of the Tahsil	No.of villag Fully affected	es affected Partly affected	Total No. of villages	
1.	Aheri	43	2	45	
2.	Etapalli	6	7	13	
	Total .	49	9	58	

Methodology:

To start with the work, the basic requisite information of the 58 villages under submergence (viz.villagewise total and tribal population, geographical area and area under forest etc.) was called from the Executive Engineer, Irrigation Department Inchampalli submergency Survey Division, Chandrapur. As the requisite information was not received within the specific time, the same was collected by the representative of the Institute by paying several visits to the concerned offices. Discussions were also held with the concerned Executive Engineers to collect details of the project.

After collecting basic information about the project and in order to undertake the field work, two types of Schedules viz.

(a) Village Schedule and (b) Household Schedule were designed for collecting the socio-economic information of the villages and the households in the submergence area of the project.

It was decided to canvass the village schedule for all the 58 villages to be affected by the project. However, in case of family schedule (household schedule), taking into consideration many constraints like volume of work, geographical pecularities of the area, time at the disposal, difficulty of languages spoken and known by the people in the area and lack of man power etc., it was decided that only 10% sample of total villages (i.e. 6 villages) should be taken and 100% households in those villages may be covered. Though the selection of these six villages was made purposive, it was a systematic one. The total geographical area under submergence was divided into six zones and from each zone a central village representing the characteristics of the whole zone in general was selected for canvassing the household schedules for 100% households.

To overcome the difficulty of languages spoken by the people in the submergence area and to carry out the survey work, Government of Maharashtra in Tribal Development Department sanctioned seasonal posts of 4 Investigators on fixed pay basis for a period of six months vide G.R.No.TRI-1082/75253/CR-52/D-3, dated 6th August 1985. Accordingly, 4 local qualified investigators knowing Telgu Madia, Gondi, Hindi, Marathi etc.were appointed for the field work. These Investigators were kept under direct control of the Project Officer, I.T.D.P.Etapalli. The work of the Investigagors was supervised by the R.O., T.R.I. Pune by undertaking tour in submergence area every month.

The undermentioned table indicates the villages selected for canvassing the household schedule along with the number of household canvassed.

Table No. 2.2

Table showing the villages selected for canvassing the household schedules along with number of household canvassed.

Sr.	Name of village	C.C. No. (1981)	Whether fully or partly affected	Tahsil	NJ. of house- holds canva- -ssed.
					:
1.	Bhangaram	441	Fully	Aheri	117
	Petta			`	<i>t</i>
2.	Mannerajaram	416	Fully	Aheri	189
	Cd manna 174	387	Fully	Aheri	31
ತ∗	Sipanpalli	301	I War any	12102 1	
4.	N_{π} iner	411	Fully	Aheri	22
5.	Perimili	328	Fully	Aheri	179
_		202	T) - ** 4: T **	Etapalli	31
6.	Koyanguda	321	Partly	neabarrr	1./ -i.
				,,,	50 CT
	Total				567
		*** *** ***			

The above table brings out the Tahsilwise break up of selected villages from Aheri and Etapalli tahsil. It is seen from the table that, all the 5 fully affected villages were from Aheri tahsil while only one partly affected villages was from Etapalli tahsil. The table also reveals that, in all 567 households from the six villages were contacted for canvassing the family schedule to know the views of the people about the project and their own rehabilitation.

CHAPTER - III

A GENERAL STUDY OF BHOPALPATTANAM PROJECT AREA

Bhopalpattanam Project area is the most undeveloped and backward area in Maharashtra State. As per 1981 Census, the total geographical area of the villages to be affected by the project is 425 sq.kms.,out of which 418 sq.kms.area will actually be submerged in the project. Out of the total area to be affected by the project, forest land ranks first i.e. 292 sq.kms., Revenue land stands second in quantity i.e.67 sq.kms. while private land stands at the bottom being 59 sq.kms.

Climate and Rainfall:

The climate of the project area is characterised as an appresive hot summer with high percentage of humidity due to large and dense forest which makes the climate uncomfortable. The humidity discharge in this area is low in dry weather being 16 percent, while the mansoon season it becomes as high as 92 percent. During the rainy season there is heavy rainfall while the winter is equally severe. May is the hotest month of the year when average daily maximum temperature goes upto 45° centigrade. The average daily minimum temperature during winter season goes down upto 13.6° centigrade. Annual average rainfall in the project area is about 1469 mm. (i.e.60 inches).

Forest:

Out of the total area to be submerged under the project,
70 percent area is forest. The project area is having the richest
forest in Maharashtra State. These forest ranges cover valuable
teak along with the lower quality of miscellaneous forests.
The entire area is forest clad, wet dicidious mixed forest with
high grass characteristics. These forests are generally of
non-teak type and the species other than teak are "Ain, Bhawada,

· Stran

Garvi, Mahuwa, Tendu and Bamboos etc.' which are economically less important. Teak occupies in appreciable quantities in small patches but scattered teak growth is found over a large area of the project.

The forest in the project area being dense, there finds a variety of wild animals which is a good source for attracting large number of tourists interested in observing the wild life and birds in their natural habits. Tigers, Panthors, Deers, Sambars, Rabits etc. are some of the important wild animals found in the area of Bhopalpattanam project.

Population and Density:

As per 1981 Census, total population of the villages under submergence area of Bhopalpattanam project is 13419, out of which tribal population is 10435. Percentage of tribal population to total population is as high as 78 percent having information regarding villagewise total, tribal population, S.T. households, number of tribal literates etc.in the submergence area of the project is given in the table No.3.1.

Table No. 3.1

List of villages from Aheri Tahsil under Submergence area of Bhopalpattanam project with their population, S.T. Households, and No. of S.T. literates etc.

S. No.	Name of the village	C.C. No.	<u>Popula</u> Total	tion (1981) Tribal	No. of S.T. H.Hs.	liter	Tril	
-ī-	5	3	4	5	6	7	8	9
	Fu	lly cov	ered vi	llages				
1.	Akera	Incl	uded in	Kurumpalli	(CC 413	3)		
2.	Aldandi	360	151	146	15	1	1	
з.,	Arenda	359	244	199	44	-	-	
4.	Asha	438	94	88	18	-		-

) <u>a dalah dalam dan</u> mendadah dalah dalah 1. 2. Kere F ansans	a, şkoszi, sowentus edilli	Berger Sterner and Berger State Services	å, a,	0,338/38/21,22/33	كريان ليستد كيا		د ده دهی مشیقاتین
		- 17	7	1			
phy with ⁴⁰⁰ too beg gay one pro billy take win the date pay and pay				-			
1 2	3	4	5	6	7	8	9
5. Brahmanpalli	418	617	117	15 (13	13	
6. Basegudo	In	cluded 1	n Echli	(CC 417)			
7. Bhangarampet	ta 441	468	449	86	47	47	_
8. Chandra	327	463	434	81	7	5	8
9. Chandampalli	358	185	181	33	1	l	
10. Chintareu	In	cluded i	n Chitwe	li (CC No	.442)		
ll. Chitweli	442	67	58	16	. 8	7	1
12. Damrecha	421	869	438	157	15	14	1
13. Dubaguda	4 20	19	19	3		-	-
14. Echli	417	816	163	146	S	1	1
15. Garewada	443	14	6	4	3	3	-
16. Gatepalli	297	163	163	27	7	_	-
17. Gurja Khurd	389	44	44	6		; 	
18. Jonawahi	419	59	59	10			
19. Kachler	295	92	92	16	, -		****
20. Kodekasa	414	13	13	2	. ***	_	*
21. Kodapalli	4 24	301	257	51	4	4	***
22. Koreli Bk.	296	502	350	. 86			
23. Kurumpalli	413	550	480	80	. ,	(and	****
24. Lankelguda	Ind	cluded i	n Echli	(C.C.No.4)	17)	i	•
25. Madvali	386	239	232	48	11	10	1
26. Mandra /	422	568	464	106	12	12	***
27. Mannerajarak	416	714	617	148	_14	12	2
28. Marampalli	385	216	193	44	1	1	-
29. Micheguda	355	41	41	7	***		and
30. Modumadgu	446	51	34	9			-
31. Mokela	364	141	141	81	***	3449 MAD	-
32. Nainer	411	106	106	16	des the	-	-
33. Naigudam	439	88	88	12	·	-	
34. Palley	362	209	206	31	20	18	2

	M. Aller had deep from the case have been deep deep deep from him.	3	4	5	6	7	<u>-</u>	9
1			~~~~~					
35.	Palekasa	Includ	ed in	Kođeopalli	(CC No.	424)		
36.	Parli	415	49	42	8		-	***
37.	Perimili	328	836	463	151	142	120	22
38.	Rapelli	363	224	. 222	36	29	27	2
39.	Ragiguda	Includ	ed in	Echli (CC	No.417)			
40.	Rela	384	66	64	9	***	-	-
41.	Sipanpalli	387	143	141	2 5			***
42.	Tonder	440	92	92	16	1	1	***
43.	Yermnar	388	458	347	· 2 6	****	-	
	Total of 43 villages		9972	7249	1619	331	297	34
	Partly	affects	d vil	lages from	Aheri Ta	hsil		
1.	Kandoli	240	922	791	146	50	48	2
2.	Kordi Kh.	329	133	133	26		gardy Silving	-
900 900 900	Total		1055	924	172	50	48	2
No. 200 to	G.T. of 45 vilin Aheri Tahs	llage s sil	L1027	8173	1791	381	345	36
A. A. A.	List of wil area of Bho S.T.Househo	mainati	Lanam i	project wit	11 OULD TT	er subm popula	merger ation,	ice
	Name of the	C.C.	Popu	lation(198]) S.T.	s.T.	itera	tes
	village	No.	Tota	l Tribal	H.Hs.	Totai		
ī	2	3	4	5	6	7		9
		Fully	cover	ed villages	<u>3</u> ,.			•
1.	Boria	368	147	. 147	22	***	 ·	
2.		366	294	294	54	11	11	***
3.		365	110	110	18	-		****
	. Jhareguda	370	16	16	4		 .	serie.
	. Kasansur	369	141	140	27			. ~
6	. Palli	322	324	312	66	25	23	2
,	Total of 6 villages		1035	1016	191	36	34	2

Partly covered villages

1	. 2	3	4	5	6	7	8	9
1.	Botanfundi	274	205	196	34	14	12	2
2.	Jinjgaon	367	354	333	60	4	4	-
з.	Kedmarra	325			-		2009	
4.	Koyanguda	321	127	127	SI	2	2	•
5.	Kudkeli	298	381	300	63	16	16	-
6.	Partampalli	324	107	107	19	1	1	
7.	Wateli	74	186	183	29	inny	-	~
	Total 7 villages	Ann 1988 (800 900 198	1360	1246	226	37	37	2
	Total of 13 villages in Etapalli Tahsil	-	2392	2262	417	73	69	4
	Grand total of Aheri & Etapall	1	13419	10435	2208	454	414	40
							1.1	

The above table clearly indicates that there is heavy concentration of tribals in the area. Other tribes are Halba, Naikpod etc. Taking into consideration, the geographical area and population of the project area, the density of population comes to 32 persons per sq.km.against 204 persons per sq.km. for the State as whole. This clearly indicates that the project area is thinly populated.

Literacy : Male and Female :

It was observed that percentage of literates in the total population of submergence area of Bhopalpattanam project is considerably low as compared to the State. Percentage of literacy among female is still lower. The position of education among the tribals is still worst. The table No.3.1 indicates that out of 10435 tribals in the project area, only 454 (i.e. 4.37 percent) tribals are literate. The table also reveals that

percentage of female literacy is negligible. The survey revealed that out of the total 58 villages under submergence, in as many as 30 villages there were no S.T.persons literate at all. From this, one can imagine the level of education in the project area. The main difficulty in spreading of the education among the tribals of the area is the language barriers. The tribals in that area do not know Marathi and Hindi except their own tribal languages. Similarly, paucity of development of roads and communication in this area kept the people away from the modern civilization.

Source of Livelihood:

The main source of livelihood of the tribals is an agriculture. They are more dependent on unsettled agriculture and allied occupations. More than 90% of the population is dependent on agriculture and allied occupations. Percentage of population engaged in industry sector was observed to be negligible.

(a) Agriculture :

Agriculture is the main source of income in the villages to be affected by the project and more than 90 percent of the population is dependent on agriculture and allied occupations. Paddy is the major crop almost in all the villages. Among the other crops, Rabbi Jawar, Maize, Til etc. are important crops. The survey of the villages revealed that, in most of the villages "Aanewari" of the crops for the last 3 years was ranging between 60 to 80 paise. Fragmentation of land, lack of soil conservation, lack of irrigation, lack of better quality lands, lack of modern technique in agriculture, inaccessability of area, lack of useful livestock, and lack of education etc. are some of the major problems in agriculture which are required to be faced by the tribals.

(b) Land Holdings

Land holdings of the tribals in the submergence area of the proposed Bhopalpattanam Hydel Project are small. Inventory of the farmers in the surveyed villages revealed that most of the land holders in the project area are either marginal or small farmers. It was observed that most of them are very poor in land holding and cannot comply with the normal economic conditions. The pressure on cultivable land is high and there is a little scope to expand the area under cultivation. In short it can be stated that more than 90% of the families including landless labourers and small farmers are economically very backward and below the poverty line.

School Facilities:

Educational facilities are very much inadequate in the villages under the submervence of the project area. Out of the 58 villages to be submerged under the project, only 22 villages are having Z.P.primary schools. In rest of the villages there is no education facility at all. There is only one Government P.B.Ashram School in the project area at Perimili. None of the village is having the school run by private Agency. Higher education facility is totally absent in the area.

Road and Communicational:

The project area being located in a forest clad and in an underdeveloped regions of Maharashtra and M.P.States suffers from poor communication and transportation facilities. In many villages there are no approach roads. At present there is no approach road or cart track leading to Dam site directly. Moreover, there does not exist good net work of roads. The villages in the project area are not connected with Tahsil H.Q. by the network of all weather roads. In some villages there are no cart routes even and communication takes place only by path routes. During the rainy season most of the villages remain cut

off and thus in this season the communication and transportation system totally colapses and the villages remain inaccessible. The supply of necessary goods to the people during rainy season also becomes difficult.

Electrification:

Of the total villages under submergence, none of the village is electrified. So far as medical facilities are concerned, it is stated that only one village is having small dispensary which is also inadequate to cater the health requirements of the people.

Drinking Water Facility :

Drinking water supply to the people in the villages is mainly from the traditional sources viz.Nallas, river, dugwells, bore-wells etc. None of the village in the project area is provided with the piped water supply.

In short, the area and the people living therein are very poor, economically, educationally. The development facilities are not reached to them and they are still living in the primitive conditions.

CHAPTER - IV

MAJOR TRIBAL GROUPS IN THE PROJECT AREA

Bhopalpattanam Project area is the most undeveloped region in the whole of Maharashtra State. The tribes residing in the area are mainly Madia Gond, Gond, Halba and Pardhans. Out of these tribal groups in the area, majority of the families are from Madia Gond community. Out of the 58 villages to be affected by the project, concentration of Madia Gonds was found in as many as 40 villages.

(1) Madia Gonds:

Madia Gond is a sub-tribe of Gond main tribe and it has been identified and declared as one of the most "Primitive Tribes" in Maharashtra. As per 1981 Census, the estimated population of Madia Gond in Gadchiroli District is 3004. The word 'Madia' is derived from 'Mara' or a tree. In Marathi also 'Mad' means a tree or forest and, therefore, Madia means forest dwellers.

The Madias are sub-divided into two groups viz. "Bada Madia" and "Chota Madia". The 'Bada Madia' lives in the far off forest on the hills while 'Chota Madia' inhabits on the plains of Bhamragad area. Dining and marriage between these two groups is a taboo. While 'Bada Madia' is indulged with hunting in the forest, 'Chota Madias' are mainly engaged in raising their food requirements.

The Madias are more attractive than any other tribals. They are having good health, physically charming, perfect figure with tender hair and golden brown colour. Both men and women are strong but compared to the men, women are more active and charming.

The Madia Villages:

The Madia village is generally small and comprised of five to ten hamlets. The internal structure of each village is as such that it has its own professional and service groups among themselves. Every Madia village has a headman or Patel who is called "Gaita". He also functions as "Bumic" or religious headman of the village. In the village, the houses of headmen are not built in any special position but those of medicinemen (i.e.the 'Bhagat') can generally be distinguished by the little huts for patients, which are built around their own houses.

On the outskirts of the village, there is the Shrine of the village Goddess and in nearby, there may be a temple of one of the clan-gods. Beyond this, there is the village burial place and cremation ground. One can see the raws of angular big stones on the burial ground which are erected in memory of the dead persons. Higher the importance of the dead person, taller is the stone erected.

The Ghotul:

Every Madia village has a common building called Ghotal. It is a house where unmarried boys and girls assemble in the evening. Through playing and jocking and by free mixing they develop friendship resulting in the selection of partners for marriages. In the Ghotul where there is a separate hut, it is also used for the segregation of menstruating women. Now a days almost in all the villages, the Ghotuls are used as resting places for the visitors. It is also used for social get-together or as a meeting place.

The Houses:

Each house of the Madia Gond stands in its own ground which sometimes is a substantial field. Generally, every house consists of three rooms with thatched or tiled roofs. The first room, which is really built in veranda, is the kitchen. It leads

to second room which is used for slipping purpose. The second room opens into an inner and secret room mostly occupied by a platform for storing grains and other possessions. The houses of the Madia Gonds are clean but are littered with great variety of domestic and agricultural implements. In the houses the men sleep on the small wooden cots while the women sleep on the floor.

Occupations:

Agriculture is the main source of livelihood of the Madia Gonds in the project area. In the earlier period, they were practising shifting cultivation and axe cultivation. However, now a days majority of the Madia Gond cultivators practise settled cultivation. The main crop grown by the Madias is rice. The other crops include maize, millet, chilly etc. In Madia community women are more hard working compared to the men. The men normally go around the forest for hunting, while women dig earth, pond the rice, grind, build the huts, fell trees and do almost everything for their household. Besides agriculture, the Madias are also engaged in gathering edible roofs and fruits and fishing.

There is nothing edible that the Madias will not eat.

They eat pigs, goats, fowls, crows, pigeons, bats, rats, ants, snakes, monkeys etc. They eat rice, maize, Kusari, Kodaki, 'Ambil' is their daily food. They have profound knowledge of fruits, roots and tubers in the forest. The children hunt rats, bats, squirrels and other small birds and after roasting them, eat with great delight. The Madias practice fishing with the nets and traps by failing out water from ponds or by poisoning the stream water. Small fishes are roasted with spices and taken with the refreshing juice of Toddy. They do not eat milk or milk products. They chew tobacco.

Implements:

The Madias use different types of implements. The axe is used for ceremonial purposes while the large knife is used to cut the bamboos and young trees. In the forest, they use 'gagra' which is a powerful weapon with longer handle. They also use bows and arrows to kill birds and animals in the jungle. Among the domestic implements, rice-husker is used by the women. The Madias make nice baskets, mats, pans, brooms, etc. from bamboos and grass for their domestic purpose.

Birth:

Delivery of women takes place at home and no special arrangements are made. On the nineth day of the child's birth, the naming ceremony is performed. On that day, the married women give bath to the mother and the child and a feast is given to the women folk on that occasion. They follow a very interesting method for choosing name of the child. A little quantity of rice is tied in a piece of cloth and is held hanging by a string nearby the child. If the child catches the rice and does not leave the grip over it till the time of uttering a particular name, that name is given to the child.

The Dress:

Both the Madia men and women are scantly clad. The men normally wear a lion cloth around their waist and sometimes small turbans on the heads. The women use small lion cloth around their waists and do not cover the above portion of their bodies. The breasts are covered only with the ornaments of beads. They wear a thin brass fillet around their hair when women visit a market, they may tie a small piece of cloth around their breasts. Children are normally naked and only school going children may be seen with clothes.

Marriage :

takes place only after puberty. The boys and girls have freedom to select their partners. Marriage by capture, marriage by mutual consent and marriage by service etc.are the common forms of marriages prevalent among them. The women have equal status with the men and they have strong hold in the family. The bride price is paid in terms of cash, paddy, goats etc. At time of marriage ceremony, a carved wooden pillar is kept at the centre of the booth. Polygemy as well as divorce is allowed and widow marriage is also permitted in the Madia Gond Community.

Death:

Among the Madias dead body is generally buried. Stones are heaped on the burial ground where wooden cot, earthen pot with water, small basket with chicken etc. are kept for the departed soul. The carved stone/wooden pillars are erected on the burial place afterwards.

Dance and Music:

The Madias are found of dancing and they cannot sing a song without dancing. Both boys and girls dance together by keeping their hands on each other's shoulders. While dancing they swing and jump in a rhythmic manner. The dancing is common on all the festivals and it is accompanied by the music of 'Dhol'. The 'Vela' dance is most famous in the Madia Community.

Religion:

The Madias have tendency to attribute personality to every object which influence them at any time. They worship many gods. Their Chief God is 'Persapen' which is worshipped

in the form of spear head or nails. It is stated that these nails are soaked in human blood and are used for getting better harvest. 'Mariale' is worshipped for prevention of diseases and death. They also worship 'Bhiwasena', 'Waghoba' (a tiger God) and 'Tadoba'. Almost on all the occasions and festivals they sacrifice goats or chicken to these dieties. Anscestor worship is common among them.

The Madias celebrate many festivals. 'Dasara' is their important festival. On this occasion they present their offerings to the Ex-Raja of Aheri. They celebrate 'Diwali' by worshipping clan Gods. Similarly, they celebrate 'Rain Festival' (after first rains), Cattle Festival, Sowing Festival and First Food Eating Festival etc.

There are many superstitions among the Madias. They believe that if human blood is offered to the Gods during harvesting period, good yields are expected. They believe in black-magic and for that they consult the 'Bhagat'. Evil spirits are supposed to enter in the body and cause the ailments. They do not milk the cows, plough the earth due to superstitions. Similarly, sounds of some birds also indicate good as well as bad omens for them.

Traditional Panchayat:

The Madias have traditional Panchayat System for deciding their disputes and offences. The Panchayat consists of "the Chaudhari (Karbhari), Mahajan, Gaita and the Panch". The punishment inflicted by the Panchayat consists of feasts and in case of minor offences a fine. The fine is spent on drinking of liquor. The penalty of a serious offence involves three feasts to Panchas and respected people in the villages.

(2) GOND S

Another major tribe in the project area is the Gond. Gond ranks third in the State. This tribe is divided into many sub-groups such as "Raj Gond, Arakh, Agaria, Asur, Bhotola, Gond-Gowari etc." The sub-divisions arise due to the occupations and professions taken by the families in the tribe. The Gonds are further divided into four <u>Sagas</u> or Phratries viz.seven Gods Phratry, six-God phratry, Five God Phratry and Four God Phratry. The Gonds are known by the name as 'Koitur' among themselves.

The Gonds are well built having dark gold, copper brown to black brown skin colour. The men wear dhoti and turban and women wear cotton sari which is firmly tied around the waists. Wearing of 'Choli' is not a traditional part. Women wear ornaments like anklets and armlets of silver. Tatooing on hands and legs is common among the women.

Village Community:

The headman of the village is called 'Patel'. He can demand a day's free service from the villagers on his fields. At the time of ploughing operations, the villagers bring their ploughs and bullocks to his fields and work there for a day. During rains, women of the village either undertake rice plantation or weeds fields of the headman for a day. The Gond houses are built in a traditional fashion of one pattern. The length of the house is generally twice of its width. The houses are having front room, kitchen, living room and lastly small annex at the back with mud walls and thatched roofs.

The Gonds are mainly engaged in agriculture. In order to suppliment their income, they undertake job like wood cutting, agriculture labourer, collection of minor forest produce like

mahuwa, lack, gum etc. Their land holdings are small. They do not practice modern techniques in agriculture due to lack of knowledge. They grow rice, millets and few varieties of pulses.

Life Cycle : Birth :

After starting pains to a pregnant woman, an experienced woman (known as 'suin') attends her. After delivery 'suin' cuts the cord of a baby with an ordinary sickle. Among the Gonds, birth of a child is considered as a blessing of the God. Birth of a male child brings more happiness to them. Pachavi ceremony is performed on the fifth day but the child is named only after 3 to 4 weeks. Untill the rite of beard shaving is not performed, a boy does not get the fulflaged status of an adult member of the society.

Marriage:

In Gond Community, marriage is celebrated observing marriage rites. Marriage in own clan is not allowed. Marriage by capture, marriage by service, marriage by negotiations and marriage by intrusion are common. Polygamy is permitted but not the polyandry. Paying of bride price is prevalent among them. Divorce and widow marriage is also permissible in Gond Community.

Diets:

Like the Madias there is no restriction on their diet as they eat fowls, leef, pork, snakes, lizards, rats, monkeys etc. along with the rice, millets etc. Drinking is an indespensable part of the Gond life.

Social life :

The Gonds observe Community manners in their social life. When the two persons meet, they clap each other in their arms and lean against their shoulders in turn. A young man touches the knees of an elder relative with his fingers and touches the

fingers to his own forehead with gratitude. The traditional Panchayat of the Gonds decide the disputes and offences. The punishment given by the Panchayat for big offences consists of feast and in case of minor cases a fine which is spent on drinking of liquor. If a Gond is arrested and sent to jail, he is not taken back in the tribe untill he gives three feasts to the Panchayat.

-Dancing and singing constitutes the social amusement and recreation of the Gonds. Their main dance is called "Karma".

"Demsa and Dandri" are their other dances. The instruments used at the time of dancing are the 'Dhol', 'Kingri', 'Phara' etc.

The Pardhans are their musicians at the time of dancing on the occasions of many festivals like 'Dasara', 'Diwali', 'Pola', 'Nagpanchami' etc.

(3) HALBA

The Halba is one of the small tribes in the project area. The name 'Halba' might have been derived from the word 'Hal' means a plough. However, this derivation is unknown to the Halbas of the project area. According to the legend, the Halbas in Gadchiroli district are migrated from Bastar district of M.P. to the South and stayed under the protection of the Gond Raja who employed them and gave them the lands. The Halba is said to be a mixed tribe born of irregular alliance between the Oriya Raja and their retainer with the women of household servants.

The tribe is devided into two endogamous divisions viz.

'puraitis' and 'Suraitis'. These groups are further divided into number of exogamous groups. The Halbas call themselves as Suryavanshi Halba and Thakur Halba. In the Halba Tribe, there are limited surnames.

The main occupation of the Halbas in the project area is cultivation and agriculture labourers. Weaving is considered as taboo for them. They do not accept food at the hands of the Pardhan. Rice is their main food. They eat mutton and fish and also dink. They also use bamboo temtraps for catching fishes.

Facing to the North is the peculiarity of the houses of the Halbas. In their houses, there is separate place for worshipping the Gods. The Halbas worship their tribal deities along with the Hindu Gods. They believe in magic and evil spirit. They celebrate 'Tej', 'Herili' and 'Sirata' festivals.

Marriage among them is generally arranged through the friend and relatives. The bride price known as 'Dej' exists among them. Like Gond Divorce and widow marriages are permitted among them. Tattooing has special cultural significance amongst them, especially, at the marriage time. Before the girl leaves her parents' house after marriage, she is tatooed with a view that she should not forget her parents any time. The Halbas generally bury the dead bodies.

The Halbas have their tribal organisation known as "Halba Samaj Mahasabha" at Nagpur consisting of respected elected elder persons from different areas. The Halbas have their traditional panchayat headed by "Mukhya" which decides the disputes. The decision of the Panchayat is finalp The Halba tribe has no any relations and affinity with the Halba Koshti Sub-Caste of Koshti Community which is a professional caste of the weavers. Compared to other tribal groups in the project area, the Halbas are slightly better off in their socio-economic conditions.

(4) PARDHANS

The Pardhans in small numbers are also residing in some

of the villages of Bhopalpattanam Project Area. They are musicians and bards of Gonds. They are also guardians of the Gond culture. The Gonds call them to sing and play on certain occasions such as funeral ceremony, community feasts, etc. Their fees for these jobs are traditionally fixed.

The Pardhans are considered an inferior than Gonds. The Pardhans can eat foot at the hands of the Gonds, but the Gonds cannot accept the food from the Pardhans. Like the Gonds, the system of exogamous clans and phratries exists in the Pardhan Community.

CHAPTER - V

ASSESSMENT OF LOSSES IN THE PROJECT AREA

This Chapter deals with the economic losses which are likely to be sustained by the people in the project area. Besides the individual losses, public losses such as forest, forest land and forest produce, revenue land, public buildings, public wells and tanks etc. need to be assessed.

In order to get an idea of losses the people in the submergence area of the project, information from the villages were collected. The comprehensive data in respect of the private houses, public houses, private as well as revenue land, forest land and forest produce, private and public wells, public tanks etc.have been collected.

The data collected through the field enquiries was tallied with the information available in the Office of the Executive Engineer, Echampalli Submergence Division, Chandrapur who has already assessed the value of the losses. The methodology adopted by them in calculating the economic losses was apraised of. Thus, the present calculations of economic losses are based on both criterias and the considerations viz. - (a) Local enquiries with the people regarding the present market rates of their properties and (b) The data collected from the Office of the Executive Engineer, Echampalli Submergence Division, Chandrapur.

The general abstract of the economic losses under the head of "Private properties" is presented as under :-

Table No. 5.1

General abstract of private properties in the Project area.

Sr. Vo.	Item of the Loss	Quantity	Valuation amount in Rs.
1. Pr:	ivate structures/Hou	ises 5392 Nos.	1,52,37,854/-
2. Pr	ivate lands	5863.34 Hectares	2,08,17,519/-
3. Pr	ivate wells	34 Nos.	3,68,000/-
	ivate fruit-bearing	1790 Nos.	2,07,650/-
То	tal		3,66,31,023/-

(1) Private structures/houses:

As stated earlier, valuation of private properties of 58 villages on various counts and aspects has already been attempted by the Public Works Department. Out of the total 58 villages under submergence, 5 villages are <u>uninhabited</u> villages. The total number of private structures in the villages under the submergence area comes to 5392. The cost of these structures was worked out to Rs.152 Lakhs. The Public Works Department of Maharashtra State at Chandrapur attempted the valuation of each structure on the assumption of its type of construction. The rates adopted are as per the prevalent rates and are taken from the C.S.R.of Public Work and Housing Department of Chandrapur Circle in the State. The private structure in the submergence area are categorised as:— (1) Residential houses and (2) Cattle sheds. Out of total 5392 structures, 3181 are the residential houses and the remaining 2211 are the cattle sheds.

Of the total 3181 residential houses, 1871 houses i.e. nearly 59% are thatched huts, 885 (28%) are tiled huts, 267 (8%) are tiled roof houses and only 158 (5%) are masonary work

houses. Villagewise details of residential private houses according to their categories along with the cattle sheds are presented in the separate statement along with the abstract.

Table No. 5.2

Table No. 5.2

Table No. 5.2

Table No. 5.2

The Statement showing villagewise number of houses according to their type in the submergence area of Bhopalpattan Project.

sr. No.	Name of the Village	Villagew Thatched huts	ise No Tiled huts	Tiled	Maso : nary	rding to Total Resi- dential houses	Cattle sheds	Grand
1	2	3	4	5	6	7	8	9
1.	A kera I	ncluded i	n Kuru	mpalli v	rillage			
2.	Aldandi	18	16	1	2	37	28 ,	65
3.	Arenda	42	15	***	1	58	38	96
4.	Asha	6	17		3	26	14	40
5.	Bamanpalli.	80	22	16	6	124	113	237
6.	Baseguda	Included	in Ech	li villa	ıge			£
7.	Bhangarampett	ta 40	24	22	11	97	68	165
8.	Boria	29	4	y	-	33	20	53
9.	Chandra	51	444			95	80	175
10.	Chaudampalli	31	5		****	36	33	69
11.	Chintareva	Included	in Chi	taweli v	village			
12.	.Chinchoda	33	9	***	****	42	35	77
13.	Chitweli	16		*****	-	16	7	23
14.	Damrencha	93	16	53	30	192	152	344
15.	Dubagu d a	5	1	Website		6	5	11
16.	Echli	80	43	45	7	192	188	380
17.	Garewada		***	***	1	1		ports.
18.	Gatepalli	28	11	-	***	39	31.	70
19.	Gornur	32	7			39	32	71
20.	Gurja (Khurd)) 2	5 .	-	***	7	6	13
21.	Jhareguda	L 4-		***		4	-	\mathcal{L}_{V}

1	2	3	<u> </u>	5	6		8	9
22.	Jonnawahi	16	2		****	18	13	31
23.	Kachler	17		6	3	26	12	38
24.	Kasansur	43	7	1	· •••	50	40	90
25.	Kodekasa	3	dation	-		3	2	5
26.	Kodsepalli	23	26	9	1	59	45	104
27.	Koreli (Bk.)	38	41	6	6	91	72	163
28.	Kurumpalli	7 8	75	1.	5	159	80	239
29.	Lankalguda	Inclu	uded in E	Cchli vi	llage			
30.	Madveli '	42	22		*****	64	47	111
31.	Mandra	81	16	28	7	152	90	222
32.	Mannirajaram	112	27	24	8	171	108	279
33.	Masumpalli	32	10	5		47	62	109
34.	Micheguda	, 6	5	~~	****	_ 11	. 8	19
35.	Mudumagdu	7	·1	-	Served	8	7	15
36.	Mokela	19	19			38	29	67
37.	Nainer	12	11	1	****	24	18	42
38.	Naigudem	22	***	-		22	14	36
39.	Palley	30	30			61	43	104
40.	Palekasa	Incl	uded in h	⟨odsepal	lli vil	lage		
	Palli	58	22	1.	*****	81	45	126
42.	Parli	7	1	 -		8	5	13
43.	Permili	124	35	31.	39	229	95	324
44.	Rapelli	38	23		4 4 7 7	65	41	106
45.	Ragiguda Rela	Inc.E	uded in 1		TTTage	10	10	20
47.	S ipanpalli	23	11	2 5 3	W	39	30	69
48.	Tonder	14		3	. 2 2	19	15	34
49.	Yermnar	51	50	. ***	2	103	57 36	160 106
50.	Botanfandi	35 48	34 20		2	71 68	35 56	105
51. 52.	Jinjgaon Kandoi	1.00	80		10	190	82	272
53.	Kedmara	. 39	14		****	53	39	92
54.	Koreli (Khurd	1) 34	_ 13	7	***	41 29	31 29	72 58
55. 56.	Koyanguda Kudkelli	16 57	42		3	102	55 55	157
57.	Paratampalli	8	***	*****	-	8	8	16
58.	Wateli	40	9			49	38	87
trans Better \$1944	Total	1871	885	267	158	3181	2211	5392

ABSTRACT

TYPEWISE PRIVATE STRUCTURES ALONG WITH THEIR VALUATION IN THE SUBMERGENCE AREA OF

BHO PAL PATTANAM PROJECT

otal	Cost in Rs	6770291/-					1 1
Grand Total	0 _N	5392	 	100%			1 1
Cattle Shets	. Cost in Rs	14245341/± 2211 2524950/- 5392 16770291/-	\$ } } 1	%			; ;
•	N O) 1.	3	41%			. !
Total Residen- -tial houses	Cost in Rs.	14245341/	/*************************************				1
Total -tial	NO I	1015	1 2 7	100%			
Massionary	Cost in Rs.	-/ 10 (2) 04	<u> / / / / / / / / / / / / / / / / / / /</u>				
Mass	S	() L	10g	2%			
Tiled Houses	Cost in Rs.		2282900/- 128				
riled Tiled	No.		267	%8			
Tiled Huts	Cost in Rs.		4317800/- 267	~	\		
. Tile	No	, 1 1	885	28%			
Thatched Huts	Cost in Rs.	1 1 1 1 1	1871 2777450/-			87%	
Thate	No	! !	1871	29%	ノ -		

The analysis of the data presented in the above statement reveals that about 59% residential houses are thatched huts. This clearly indicates the poor economic conditions of the people in the project area. The proportion of the thatched huts as well as tiled huts taken together works out to 87%. The masonry work houses and tiled roof houses form only 13%.

The percentage of cattle sheds in the total structures is 41%. The total cost of these cattle sheds is worked out to Rs.25 Lakhs which is based on the information gathered from the village functionaries and the local sources.

(2) Private Lands:

Bhopalpattanam project is purely a hydel one and is not meant for irrigation purpose. As such, the data regarding private land consisting of both - (a) irrigated and (b) unirrigated lands is not collected separately for each category. However, during the field enquiries, an attempt is made to guage the extent of irrigated area in the project. It is revealed that the area irrigated is megre. The total cultivable land from 58 villages likely to be submerged is to the extent of 5863.34 hectares, the cost of which is fixed at Rs. 208 Lakhs. The cost is calculated as per the types of soils existing in the area and the rates are reckoned ranging between Rs.3,000/- to Rs.4,000/per hector. The rate seems to be very low. It is, therefore, necessary to review the present rates at the time of actual acquisition of the private lands. The payment to the individual person will have to be made according to the then prevailing rates of the time plus additional value to be added to it.

(3) Private wells:

The analysis of the data collected through the field enquiries revealed that there are only 34 private wells situated

in 14 villages. In the remaining villages, there are no private walls. This situation can highlight the extent of irrigation possible with these number of wells. The details of the wells under submergence area is presented in Table No.5.3.

Table No. 5.3

Private Wells

Details of Villagewise number of wells and their cost in rupees under submergence area of Bhopalpattanam Project.

Sr.	Name of the Village	No.of wells	Type of wells	Cost in Rs.
1	2	3	4	5
1.	Asha	l	Kaccha	10,000/-
2.	Bamanpalli	2	Kaccha	20,000/-
з.	Bhangarampatta	4	Kaccha	40,000/-
4.	Chinchoda	1	Kaccha	5,000/-
5.	Kasansur	1	Open well	8 , coo/-
6.	Kunumpalli	1	Kaccha	8,000/-
7.	Dumr encha -	6	5 No.Kaccha 1 No.Pacca	60,000/-
8.	Madvelli	2	l No.Kaccha l No.Pacca	28,000/-
9.	Mannergaram	4	3 No.Pacca 1 No.Kaccha	73,000/-
10.	Modumadgu	1	Kaccha open	8,000/-
11.	Permili	3	l No.Pacca 2 No.Kaccha	41,000/- open
12.	Tondel	. 1.	Kaccha	8,000/-
13.	Echali.	5	Kaccha	24,000/-
14.	Jinjagaon	2	l Open well l Open pacca well	35,000/-
	Total	34		3,68,000/-

The table No.5.3 indicates that the economic losses involved on account of submergin of the 34 private wells is

Rs. 3.68 Lakhs. The present valuation of the private wells has been attempted on the basis of rates worked out by the P.W.D.Chandrapur Circle. The rates worked out by the P.W.D. are based on depths, diameters and type of construction of wells adopted by the concerned people. The present rates need to be revised.

(4) Fruit bearing trees:

that the total number of private fruit bearing trees coming under the submergence area comes to 1740 having different types of trees, such as, "mango, lemon, tad and chinch etc." The other species include coconut, mahua, kaju, orrange, bor etc. The valuation of the private fruit bearing trees has been attempted on the basis of the present market rates quoted by the village functionaries and on the basis of data gathered from the Office of P.W.D.Chandrapur Circle. The total cost of these trees comes to Rs.2.07 Lakhs. Villagewise picture of the fruit bearing trees in the project area is presented in Table No.5.4.

Table No. 5.4

Different kinds of trees in the villages to be submerged under Bhopalpattanam Project.

Sr.	Name' of	village	Mang			Lemon	bear'ng Others	Total
1	2		3	4	5	6 	·	8°
1.	Akera		6	7	-	5	÷	18
2.	Aldand1		4	24	***	S	6	36
з.	Arenda		8	· •••		5	5	18
4.	Asha		2	5	2	2.		11
5.	Bamanpalli		***	81		, was	***	21
6.	Baseguda		Inc	luded 1	n Echli	village	:	
7.	Bhangaramp	eth	7	5	, 5	3		20

LA LIA CALLAR SOLDER CERTIFICATION (CONTRACTOR)

		•					•	
1	2	3	4	5	6	7	8	****
8.	Boria	6	-	2	2		lo	_
9.	Chandra	1	13	2	7		23	
lo.	Choudampalli	4	4	_		l	9	
11.	Chintareu	Inc	luded in	Chi ta	weli			
l2.	Chinchoda	15	29	4	3	•••	51	
13.	Chi tweli	ı		3	1	b	4	
14.	Damrencha	46	219	32	5	43	34.5	
15.	Duhaguda	P-W	2	1	-	***	3 /	
1,6.	Echli	59	169	26	26	105	385	
17.	Garewada		•	-	-	,	**	
18.	Gatepalli	1	17	3	2	****	23	
19.	Gornur	944	***	****		~		I
20.	Gurja (Khurd)	l	2	. 2	1	Print.	6	
SI.	Jhareguda	ı	S	***	3	3	9	
22.	Jonnawahi	-	20	3		_	- 2 3	
23.	Kachler	-	1		****	-	1	
24.	Kasanur	9	15	3	5	7	39	
25.	Kodekasa	1	s		2	-	5	
26.	Kodsepalli	3	13	3	2	3	24	
27.	Koreli (Bk)	9	-	- ·	3	1 .	13	
28.	Kurumpalli	13	.=		7		20	
29.	Lankalguda	Incl	uded in	Echli	village			
30.	Madvelli	17	***		11	- 	28	
зi.	Mandra	4	***	***	11	11	15	
32.	Mannerajaram	33	20	-	25	19	97	
33.	Masumpalli	6		-	5	-	11	
34.	Micheguda	-	1	2	5	-	5	
35.	Mudumodgu	y	· , -		***			
36.	Mokela	****	1		1		SC	
37.	Nainer	3	2	-	1		6	

1	2	3	4	5	6	7	8
38. 1	Naigudem	many face and been and been and	,		****	•••	_
	Palley	jan	1	Maren	1	***	5
40. 1	Palekasa	***	7	•••	2	**	9
41.	Palli ·	3		-	10 .	19	32
42. 1	Parli	-		744	1	-	1
43.	Permili	16		4900	33	S	51
44.	Rapelli	2	8	3	1		14
45.	Ragiguda	Incl	uded in	Echli	village		
46.	Rela	grange			¥~~		***
47.	Sipanpalli	1			1.	~	2
48.	Tonder	2			. 1	,,,,,	3
49.	Yermnar	13	Parentel		7	jima.	20
50.	Botanfandi	2	3	1		***	6
51.	Jinjgaon	18	22	1	16	3	60
52.	Kandodi	16	10	6	4	42	78
53.	Kedmara	1	4				5
54.	Koreli (Khurd)	 .	derect.		***	7	, 7
55.	Koyanguda	5	1	3	9	1000	18
56.	Kudkelli	56	-		. 5	1	62
57.	Paratampalli	* ****	****			~~	***
58.	Wateli	4	10		****	2	16
	Total	399	660	107	233	291	1790

The analysis of the data in Table No.5.4 brings out that more than 30% of fruit bearing trees are of Tad species followed by Mango, Lemon and Chinch. The cost of the fruit bearing trees is worked out on the basis of the local rates quoted by the village functionaries and the local sources ranging from Rs.100/- for Tad and Lemon to Rs.200/- for mango and chinch species. The cost of other categories is computed

on the basis of the rates ranging between Rs.50/- to Rs.200/-depending upon the importance of the tree.

In conclusion, it can be said that the economic losses on account of private properties covered under all the categories works out to Rs.366 Lakhs which forms less than 2% in the total economic losses in the project.

Total Losses

		Rs.in Lakhs
(1)	Private properties	152.00
(ii)	Private land	208.00
(111)	Private well	3.68
(1v)	Fruit bearing trees	2.07
	Total	365.75

CHAPTER - VI

THE LOSS OF FOREST LAND AND FOREST PRODUCE, REVENUE LAND AND OTHER PUBLIC PROPERTIES IN THE PROJECT AREA

This Chapter deals with the economic losses on account of public properties, including forest land and forest produce, revenue land and other public properties like public buildings, tanks, wells etc.

FOREST

The project mostly engulfs the forest area to the extent of 29429 hectors out of 42458 hectors to be submerged. The percentage of the forest area to the total works out to 70%. This indicates the predominance of the forest in the submergence area. The remaining land falls under the category of cultivable lands consisting of private and public agencies.

The villagewise picture of forest lands and the cost thereof is presented in Table No.6.1.

Table No. 6.1

Degails of Forest Land to be submerged under Bhopalpattanam Project and it's amount of valuation.

Sr.	Name of	the	Village	Forest land in hectors	Valuation (Amount in Rs.)
No.					dament battle periode street depart with a trian from their years period driven driven term to be been been been been been been been
1.	Ar enda			1598.36	39,91,375.00
2.	Bamanpalli			479.46	11,88,030.00
	Bhangaramp	etta		576.67	14,41,675.00
	Boria			644.90	16,12,250.00
5.	Chinchoda	٠.		786.64	19,66,600.00
6.	Damrencha			431.23	10,78,075.00
7	. Duhaguda		•	498.86	12,46,150.00
8	. Echali			1222.68	30,57,200.00
9	. Garewada	٠		. 20	760.00

Sr. Name of the Village	Forest land in hectors	Valuation (Amount in Rs.)
lo. Gatepalli	- N 1 1 -	
11. Gurja	886.40	22,16,000.00
12. Jhareguda	- N 1 l -	
13. Jonnawahi	- N i l -	
14. Kachler	336.33	8,40,825.00
15. Kodekasa	332.75	8,06,875.00
16. Kodsepalli	1101.00	27,52,505000
17. Koreli (Bk.)	1796.25	44,90,625.00
18. Kurumpalli	1606.58	40,26,559.00
19. Madvelli	937.81	23,44,505.00
20. Mandra	7 58 . 02	18,95,050.00
21. Mannerajaram	435.76	5,66,792.00
22. Masumpalli	748.95	18,72,375.00
23. Michegudu	1.50	3,750.00
24. Modumadgu	- Nil -	- Nil -
25. Mokela	- Nil 4	- N11 -
26. Nainer	1.02	2,550.00
27. Naigudem	- Nil Ұ	- Nil -
28. Palley	412.15	10,30,375.00
29. Parli	- Nil - \	- Nil -
30. Permili	689.07	17,22,675.00
31. Rapelli	- Nil -	- N1.1 -
32. Rela	331.81	8,29,525.00
33. Sipanpalli	1726.72	43, 16,800.00
34. Yermnar	1665.59	41,63,975.00
35. Botan Fundi	951.05	23,77,625.00
36. Jinjgaon	859.59	20,33,125.00
37. Kandoli	1611.08	40,27,700.00
38. Kedmara	1237.43	31,61,075.00
39. Koreli (Khurd)	1129.79	28,24,475.00

Sr. Name of the Village	Forest land in hectors	Valuation (Amount in Rs.)
40. Koyanguda	.48	1,200.00
41. Kudkeli	1309.88	42,23,666.00
42. Paratampalli	825.85	20,69,625.00
43. Wateli	1314.94	32,87,350.00
Total	29,249.00	7,34,69,732.00

The Table No.6.1 reveals that the total forest area to be submerged under the project is came to be 29,249 hectors and the likely loss of the forest land as per the prevailing market rate works out to Rs.734 Lakhs.

FOREST PRODUCE

The forest in the project area is one of the best teak forest in the country. The species found in the forest include best quality teak, Bija, Ain and other miscellaneous species. From the forest area under submergence, the yields of timber and other valuable material is estimated to the extent of 4,50,125 c.mtrs.and that of fuel beats is 15,43,221 costing Rs.194.15 crores. The cost of extraction of those forest produce is estimated at Rs.12.86 crores. The income from other minor forest produce is also not negligible. The above estimated economic loss has been calculated by the Conservator of Forest, South Chanda Division, Chandrapur.

In addition, the proposed project will involve the loss of abode of wild animals viz.six tigers, 12 panthors, many deers, bears, bisons, nil gais etc.in the forest area. They will have to go in search of other abode.

REVENUE LAND

Revenue land to the tune of 6,671.61 hectors from all

the villages will be submergened under Bhopalpattanam project. The revenue lands are mainly used for grazing of cattles and other public purposes. The cost of these lands is worked out to Rs.1.74 crores.

PUBLIC PROPERTIES

Public properties include Musafir Bungalows constructed by the villagers, temples and also any other such structures which is used for common use of the villagers. The survey undertaken in the submergence area revealed that there are in all 26 such type of public properties and the cost of these properties works out to Rs.61,214. The details of the public properties is given in Table No.6.2 below.

Table No. 6.2

Table showing the details of public properties in the villages coming under submergence area of Bhopalpattanam Project.

Sr.	Name of the village	Type of property	Valuation amount in Rs.
1	2	<u> </u>	4
1.	Asha	Musafir Bunglow	1,115.00
2.	Bamanpalli	n	2,020.00
3.	Bhangarampetta	House of village	2,043.00
4.	ti ,	Rest House of village	2,329.00
5.	Boria	Musafir Bunglow	2,194.00
6.	Chinchoda	Ħ	2,118.00
7.	Echali	ŧì	910.00
8.	Basequda) Ragiguda)	Temple	1,127.00
9.	Lankalguda	Temple (2 Nos.)	2,487.00 3,763.00
lo.	Kachler	Musafir Bunglow	1,130.00
11.	Kasansur	n,	2,150.00

1	2	3	4
12.	Kodsepalli) Palekasa)	Musafir Bunglow	2,857.00
13.	Koreli (Bk.)	. n	2,742.00
14.	n	Bunglow built by villagers	6,100.00
15.	Kurumpalli	Public House	3,094.00
16.	Mandra	. 11	1,553.99
17.	Nainer	Musafir Bunglow	1,395.00
18.	Palley	n	2,204.00
19.	Parmili	Temp h e	622.00
20.	Yermnar	Public House	1,175.60
21.	Jijagaon	Musafir Bunglow	1,952.00
22.	Kandoli	Musafir Bunglow Balwadi Centre	8,321.00 2,326.00
23.	Padtampalli	Musafir Bunglow	1,463.00
	Watoli	n	2,044.09
	Total	Rs.	61,214.00

Zilla Parishad Properties

As per the provisions under Public Utility and Development Services, the Zilla Parishad Gadchiroli has provided some structures like school buildings, grampanchayat offices, hostels etc. including open lands for play grounds and other public uses, in some of the villages of the project area. The field enquiries reveals that there are 23 such type of properties from 12 villages of the submergence area and the cost thereof worked by the P.W.D.Z.P.Gadchiroli comes to Rs. 5.78 Lakhs.

Public Wells

Under the Health Programmes of the Government, some villages in the project area are provided with drinking water

wells including one tube well and three bore wells. The total number of those wells is 15 and the cost of these wells comes to Rs.3.00 Lakhs, the details of the Government wells is given in Table No.6.3. The remaining villages are not having Government wells.

Table No. 6.3

Details of Government Wells in the Project Area

Sr. No.	Name of the village	No.and Type of the well	Amount in Rs.
- <u>-</u>	2	3	4
 1.	Asha	Pucca well	30,000.00
2.	Kodsepalli	2 Nos.1 pucca 1 bore well	40,000.00
3.	Tonder	Pucca well	25,000.00
	Vermnar	Bore well	15,000.00
5.	Mi cheguda	Pucca well	20,000.00
6.	Botanfundi	Bore well	20,000.00
	Kandoli	7 Nos.6 pucca 1 bore well	1,40,000.00
8.	Wateli	Pucca well	20,000.00
	Total	Rs	. 3,10,000.00

Public Works and Roads

While fixing the M.W.L.of reservoir of Bhopalpattanam Project, the part of Allapalli Bhamragad road will come under the submergence area for quite a gib length and at the place near Permili village, it needs to be diverted via-Kandoli. Moreover, the major bridge on river Bundia will also go under the submergence and hence that length (length of the bridge) will have to be shifted to the up-stream i.e.above M.W.L. The costs of these roads including cross drainage works in pieces

are worked out to Rs.36.67 Lakhs by P.W.Department. This amount does not include the cost of additional length of roads required for diversion and crossing. That will be calculated only after finalization of new roads alignment by Public Works and Housing Department.

Local Tanks (Bodies)

Survey of the villages under the submergence area reveals that out of the 58 villages, 8 villages are having eight tanks (Bodies). The cost of these tanks works out to Rs.30 Lakhs. These tanks are either vested with the Z.P.or with the Gram Panchayat for drinking water and irrigation purposes.

Forest Quarters

Bhopalpattanam Project area, Forest Department has constructed some quarters, Rest Houses and Labour Sheds along with the Inspection Huts for Officers who inspect the various activities undergoing in the forest. The total number of these structures are 32 and the cost worked out by the Forest Department is to the tune of Rs.4.41 Lakhs. The details of Forest Quarters in the villages under the submergence area are given in Table No. 6.4.

Table No. 6.4

Details of Forest Quarters under submergence area of Bhopalpattanam Project

Sr. Name of the		Type of property and its number	Valuation amount in Rs.
No.	2	3	4
	Garewada Kodsepalli	1 No.Forest Quarter 2 Nos.Forest Quarters	32,211.00
	Koreli	3 Nos.Forest Quarters	27,034.00

1	. 2	3	4
4.	Mandra	1 No. Forest Quarter	57,586.00
	Mannerajaram	5 Nos.Forest Quarter	75,677.00
	Nainer	1 No.Forest Quarter	1,631.00
	Palli	1 No.Forest Quarter	2,857.00
۶.	Sipanpalli	2 Nos.Labour Quarters	41,677.00
	Asha	4 Nos.Labour Quarters	55,965.00
10.	Chinchoda	3 Nos.Guard Quarters	5,009.00
. 11.	Kandoli	Forest Quarters) Labour Quarters) 5 Nos. Inspection huts)	1,07,295.00
12.	Kudkelli	4 Nos.Forest Quarters	19,360.00
	Total	32 Quarters Rs.	4,41,196.00

Assessment of Mineral Resources

As per the available records, it can be said that the mineral resources of economic significance are not available in the reservoir area of Bhopalpattanam project. The granite gneisses is the most prevalent rock in the area. Other types of rocks are limited in extent. The granite rocks in the area contain quartzs and felspar as the main mineral and biotite as common accessory. The other minor minerals include clobite, zircon, epiotte, hypartnene etc. The gneisses of the granite may be useful as building stores and as road metal.

Thus, briefly it can be stated that the loss due to submergence of the public properties is very tremendour which amounts to Rs. 216.91 Crores, the percentage of loss under public properties amongst the total loss (i.e.loss of private and public properties taken together) is 98%.

Total Losses

		Rs.in Lakhs
(1)	Forest	734.00
	Forest Produce	1,286.00
(11)	Forest Materials	19,415.00
(111)		174.00
(1v)	Revenue Land	
(v)	Public properties	0.61
(vi)	Z.P.properties	5.78
(vii)	Public wells	3.10
(viii)	Public Works and Roads	36.67
(ix)	Local Tanks	30.00
(x)	Forest Quarters	4.41
,	Total Rs.	21,691.00

CHAPTER - VII

OBSERVATIONS AND FINDINGS

On the basis of socio-economic study of the project dealt with in the previous Chapters, following few conclusions are derived:-

- (1) No administrative approval has yet been received from Government to this project. And as such the actual work of construction of Bhopalpattanam project has not yet been started. Under such circumstances, it is not known when the project is likely to be taken up and what will be the controlling level of the reservoir at that time. Moreover, it is also not known whether the project will be actually taken up or not.
- (2) The people in the villages under the submergence are tribals who are most backward both socially and economically. They are forest dwellers. They appear to be happy in the present environment and they do not want any drastic change in their present life.
- (3) The data collected through family schedules for 514 families from the selected six villages in the project area reveals that most of the people shows least tendency towards migration to the places of rehabilitation. Out of the total 514 families, 213 families (41%) expressed their negative opinion about execution of this project. They do not want any change in their present habitates, 241 (47%) families expressed that they should be rehabilitated within the same taluka where they are living, 58 families (11%) expressed their views that if it is not possible to rehabilitate them within the same taluka, the should be rehabilitated only in adjoining talukas of their present taluka. Only one family showed its willingness for rehabilitation anywhere within the district while another one

family ready to accept rehabilitation outside the district.

The reasons of unwillingness of most of the people for migration from their present villages are:-

- (a) Non-availability of forest environment in other places to which they are very much aclimatised.
- (b) Fear in the minds of the people in getting exact proportion of holding than what they have in actual possession.
- (c) Availability of bare subsistance in the forest by way of hunting and fishing, collecting fruits and roots etc.
- (d) Fear of ethnocide etc.

In the opinion of social workers in the project area execution of this project will result into irrepairable losses of the valuable forest and mineral wealth in the area and scenic beauty of the area. Moreover, there will be ethnocide of the tribe people as their ethno-cultural identity will not be preserved after rehabilitation. They think that the tribal people will loose more than what they will actually get after completion of the project. In their opinion, the socio-economic conditions of the tribal people in the area will be worst than before.

The study of losses anticipated due to submergence of private and public properties leads to the conclusion that the total of losses will be worth Rs.220.58 Crores which is tremendous. Out of this total loss, the cost of loss of private properties is Rs.3.60 crores. Of the total value of public properties, value of the forest produce and cost of its extraction alone is Rs. 207.02 Crores which amounts to 95%. Brief description of itemwise losses (quality and value) is presented in the abstract given below:

A b s t r a c t

Itemwise quantity and value of the loss

Sr.	Name of the item	Quanti ty	Amount of valua- tion (Rs.in Lakhs)
1.		5392 Nos.	152.38
2.	Fruit bearing trees	1790 Nos.	2.08
3.	Private land	5863.34 Hect.	208.18
4.	Private well	34 Nos.	3.68
5.	Public property	26 Nos.	0.61
	Revenue land	6671.61 Hect.	174.75
7.	Public Works and Housing roads	Part of Allapalli Bhamraga and a bridge	36.67
8.	Zilla Parishad property	23 Nos.	5.79
9.	Government well	12 Nos.	3.10
10.	Irrigation Tank	8 Nos.	30.00
	Forest land	29249 Hect.	734.70
	Forest Quarter	32 Nos.	4.41
	Forest produce	Wood-4.50,125 C.M.	19,415.83
14.	Extraction cost of forest produce	Fuel bits 15,43,221 Nos.	1,286.05
	Total		22,058.23

Rs.402.94 Crores and is likely to give a return of 10.58% at the end of 10 years after its completion. Thus the cost of construction of the Dam and the value of losses together will cost more than Rs.623 Crores at the present rate. According to the expert's opinion, the project would cost more than Rs.1,000 crores by the time it is completed. The work of rehabilitation of the people is quite heavy task and the action to make it

successful will require tremendous efforts on the part of the implementing machinery.

Some of the important benefits to be achieved from the project are mentioned below :-

After completion of the project, some scope exists for the development of industries. The surveys conducted by the Government of India under the programme of "Pre-investment Surveys of Forest Resources", reveals that there are more chances to start forest based industries in the nearby area. Industries like pulp-mill, hard-board, commercial plywood-cum-flush doors, particle boards and match factories etc.can be started near to this area. This will provide an excellent opportunities of employment to the local people.

The project being a hydel one, will supply needed peaking power to both the electricity grid of M.P.and Maharashtra at a cheap rate. M.P.State, at present, is deficient in hydel power for optimum operation of its resources and peaking power is an urgent need of the State. Maharashtra State will get an additional peaking power to meet its urgent need for hydel power. The power would be utilized for lighting purposes and energising the pumping sets of cultivators for irrigation purposes which will result in increase in food production. Lift irrigation would be possible without any reduction in peaking power from the project. Similarly ground-water projects in this zone near the perifery of the reservoir and also in the down-stream areas may improve.

The reservoir would help in the development of fisheries. About 700 matric tonnes of annual fish production is expected every year providing employment to approximately 600 fishermen.

Bhopalpattanam hydol dam will prove an important link if inland navigation develops in Indravati valley between M.P. and Maharashtra.

Thus, ultimately the development in all these sectors, due to the project, will provide large socioeconomic banefits to the local people. However, it must be noted that the country would loose valuable forest wealth minerals and there will be ecological and environmental inbalance in the area. The local people would be at loss by their cultural and social life.

CHAPTER VIII

Rehabilitation of the displaced persons - ... Some Suggestions

- 1. Having looked into the socio-economic aspects of the problem, it will be worth-while to devise the model rehabilitation programme for the project-affected people. On the basis of the data collected and processed and the opinions expressed by the people affected under the project, certain guidelines may be framed for the model rehabilitation programme of the displaced persons.
- 2. The Government in Irrigation Department had instructed the Institute to carry out the socio-economic survey of the submergence area of Bhopalpattanam project with the view that the tribal people to be affected should be rehabilitated with preserving their ethnic-cultural identity. With this object in mind, following suggestions are made in connection with their rehabilitation.
- 3. It is suggested that prior to the establishment of any major hydel or irrigation project in the tribal areas, the views of the tribal people (to be affected) regarding the future project should be given due weightage. The Government should form a machinery to collect detailed information of the families to examine the individual losses and to suggest the measures for their economic remabilitation on ideal basis. In other words, participation of the affected people is a must in any project if it is to be successful one.
- 4. Since the work of rehabilitation of displaced persons is an important one and involves the time lag, is is suggested that the posts created for rehabilitation purpose should be manned by the effcicient and skillful personnel having integrity and sympathy. The frequent transfers of such personnel are,

11.17、日本は、大変では近年、建設は大角管は管理の構造は多数の機関を開けなり、これできない。

therefore, not desirable. They should be retained on a particular project at least for a period of 3 years with certain exceptions.

- 5. It is suggested that, while designing the project, the officials of rehabilitation Department of the Government should be co-ordinated with the officials of the project designing wing. Similarly, the project report should contain the detailed chapter on the procedure/stages of rehabilitation scheme under the project.
- 6. It is a fact that the commission of Bhopalpattanam project will involve the colossal loss of the valuable forest. Nearly 2/3rd of the total area to be submerged under the project, is covered under the forest. In terms of value, it can be stated that the loss involved due to submergence of the forest will be to the tune of Rs.200/- crores. The inherent lossess on account of environmental disturbances would also be upto the maximum extent. On the background of bringing more and more areas underforest as per the protection of forest policy, these tremendous lossess of forest need to be seriously thought of before starting of the project.
- account of various projects, the Government have set up a District Level Resettlement Advisory Committee consisted of M.L.As., M.L.Os., President of Zilla Parishad and two other nominees of the project affected persons alongwith the concerned Government officials. The Project Officer, I.T.D.P. Ettapalli and the Tribal Development Officer of Aheri are not the members of this Committee and as such, it is likely that they may not be involved in the process of rehabilitation.

At present, there is a communication gap between the displaced tribal people and the officers of Revenue Department. It is hoped that the Project Officer and the Tribal Development Officer can bridge up this gap and establish good raport with the tribal people by extending guidance to the concerned - officials in the process of rehabilitation. It is, therefore, suggested that they should be taken up on the committee. This committee should bring out to the notice of the Government if it observes any discrepancy in rehabilitation of the affected tribal families.

- 8. It is generally observed that the alternative lands given to the displaced persons are located in scattered places. If such a type of allotment of lands is made to the tribal people, they show unwillingness to accept the lands at the places where they feel unsafe and are afraid of harassment by the non-tribal people. Under such circumstances, the actual benefit of the allotted lands goes to the more clever non-tribal people. It is, therefore, suggested that the allotment of alternative lands should be made in such a fashion that atleast a group of 25 50 30 displaced families should get the lands at one place within the radius of five kms. from the newly selected Gaothans having grazing facilities, so that they will feel safe and live together and maintain their ethno -cultural identity.
- Due to ignorance, illiteracy and lack of foresight, the displaced tribals generally prefer cash compensation for their properties which they spent on drinking and on other non-productive purposes. Thus, they loose their lands due to the project on one hand and the compensatory money on the other.

Therefore, it is suggested that as far as possible, the compensation to the displaced tribal families should not be made in cash. Cash compensation should be paid only when the land to be acquired is very small. "Land in lieu of land" should be given to the tribals in the villaves where their relatives are inhabited. By doing so, they will not be degraded to landless labourers and they will maintain their ethnocultural identity also.

- 10. At present, the prices of the acquired lands are determined as per the Government standard rates which are
 generally less than the market prices. Under such circumstances
 the poor tribal people are badly affected. It is, therefore,
 suggested that the compensation to the tribals for their acquired lands may be given as per the market prices three
 times more at the time of acquisition of the lands.
- 11. The various concessions granted by the Government to the project affected persons should be given to them. These concessions are :-
- (a) The displaced persons should be allowed to cultivate their acquired lands till the time of actual submergence on certain conditions.
- (b) The people should be permitted to take useful construction material from their acquired houses without any reduction in the amount of compensation of the houses.
- (c) They should be allowed to remove the constructional material free of cost from Government quarry, Government waste land and forest land etc. for their houses in new Gaothan.

- (d) The supply of house building material such as cement and cement sheets should be made available to them at once.
- (e) The displaced persons should be given the certificates showing that they are the project affected persons, so that they will avail the Government concessions without much disturbances.
- (f) The project affected persons are provided transport by the project authorities to carry their luggages to new Gaothans.
- while securing Government services or obtaining admissions to I.T.I., the wards of the displaced persons should be given special concessions, viz.: relaxation in qualifications and age etc. Atleast one person from each of the affected families should be provided with employment either in Government or in private sector in any capacity considering the capability of the person concerned. Similarly, necessary binding should be made on the executing Institutions and constantors that they must provide work to the personnel from affected families in the project area.
 - which the skilled labourers such as masons, plumbers, carpenters electricians etc. are required. It is, therefore, suggested that the suitable personnel from the affected families should be selected for such trades, so that they will have additional income resource. Similarly, the project affected families can raise their income if they are encouraged to undertake the supply of family needs such as vegetables, dairy prodjets poultry etc. to the officials on the project site. ...64

- 13. It is a fact that most of the tribals (who are illiterate) in the project area are unable to count the notes to be received by way of compensation and it is likely that they may be deceived by the middlemen. To avoid it, it is suggested that as far as possible the payments of the compensation to these people should be made in presence of Project Officers of I.T.D.P., Tribal Development Officers or Managers of Adivasi Co-operative Societies who will safeguard the interest of the illiterate tribals by ensuring the correct amount of money.
- 14. In order to preserve the ethno-cultural identity of the tribals under the project and to avoid their ethnicide, it is suggested that these people should be rehabilitated on the perifery of the project area only. As most of the tribal people in the submergenc area forest dwellers for years together, they have developed a very kin relations with the forest in their day-to-day life. Therefore, their rehabilitation outside the forest means: "Growing fishes outside the water"

 It is, therefore, suggested that these people should be rehabilitated only on the perifery of the project having forest within the radius of 5 to 10 kms.
- The colossal loss of forest species on account of submergence of the area, may be recouped with the crash programme of plantation on Government waste land and denuded forest. This will help to keep the balance of forest vegetation. This programme should be handled with top most priority.
- 16. Selection of site of new Gaothan for the project affected persons is of paramount importance in the process of rehabilitation. The selection of site for new gaothan

A CONTROL OF A SECTION AND THE CONTROL OF A CONTROL OF A SECTION AND A SECTION ASSESSMENT OF A SECTION ASSESSMENT ASSESSM

should be based on availabidity of water for drinking and other purposes throughout the year either in the locality or in the village boundary. It is, therefore, suggested that unless the Ground Water Survey Department (G.S.D.A.) certifies of strucking enough water for the requirement of people in the village, selection of site for new gaothan may not be fixed. Moreover, it is suggested that every new gaothan should have a drinking water well irrespective of the fact whether the acquired gaothan had it or not.

- In order to provide civics amenities quickly to the displaced persons, the responsibility of construction of approved civics amenities (such as drinking water wells, school buildings, dispensaries, chawadies, bus-stands, cremation grounds, internal and approach roads etc.,) should be entrusted to the project authority itself and not to the Zilla Parishad. The cost involved in these constructions should be met from the funds of the concerned project. Moreover, in order to meet the expenditure on the civic amenities, there should be a separate "Account Head" with the Resettlement Department. The project affected people will have to be provided with all the civic amenities in new Gaothans. Thus, the job of rehabilitation is tremendous and the action to make it successful will require more tremendous efforts on the part of the implementing authorities.
 - In the proposed new gaothans, taking into account the strength of school going students and eligible children, enough school buildings will have to be irrected. Every new gaothan should have a school building.

¥ .

Moreoverk it is a general experience that the teachers in the tribal area do not attend the schools regularly as 19. ..66

they stay elsewhere for want of better quarters, which ultimately affects the quality of education of tribal pupils. Therefore, it is suggested that along-with the construction of school buildings in new gaothans, construction of quarters for teachers may be undertaken simultenously. Similarly, alongwith the construction of dispensary in the central new gaothan, residential quarters for doctors and nurses may be undertaken; so that the displaced persons will get the medical help in time.

- 20. Chawadi or community centre in tribal village can be utilised for multi-purpose programmes such as a place for running Balwadi, organising panchayat meeting and for holding Government officials. It is, therefore, suggested that in every new gaothan, there should be chawadi for all sided development of the project affected tribal people.
- In the new gaothan, internal and approach roads should 21. be provided as early as possible. This will facilitate the contact of rehabilitated persons with the outside world. Similarly, it is suggested that in the process of rehabilitation, the displaced persons should be brought to the road side and not the roads should be developed in the remote areas. The affected people should be asked to work on the roads and other similar works. Moreover the areas for play-ground, cattle-sheds, S.T. stand, public latrines and the area for cremation and burial ground etc. for the villages should be earmarked before construction of the residential houses in the new gaothan. This work should be given priority. Rehabilitation of the affected persons should be made before storing of the water in the Dam and displacing the people from their habitates.

- 22. It is suggested that, in the process of rehabilitation of the displaced persons, a thought to the orphanage accommodation has to be taken into account as they will not get any compensation from the project. The orphans should be provided with free accommodations.
- It is generally observed that, the emergence of any 23. Government project adds the cash in the hands of the affected persons in the beginning which ultimately proves as miracle. With the cash in hand and many attractions, the tribal people without foresight spend the amount on unwanted and unproductive It is, therefore, suggested that for solving the problem of rehabilitation and accommodation of the displaced persons in the new gaothans, the Government should not rest containt with the mere disbursement of money in cash to the tribals, as they lack the sence of judicious spending. programme of construction of residential houses alongwith the required amenities for the project affected persons should be managed systematically by the Government as a trustee of public interest. What is needed here is the social approach towards the social problem and that too with deep moral significance.
 - 24. The Madia Gond is the predominent primitive tribe inhabiting in the submergence area of Bhopalpattanam project. They live in isolation at a very low level of literacy and poor economic conditions, according to their own customs and traditions without any contact with outside world. Therefore, in the process of their rehabilitation, very careful steps need to be taken, otherwise, they may be degenerated to any extent resulting into their worst position than ever. Therefore, it is suggested that they should he rehabilitated

Į,

only in the areas of their choice, without disturbing their customs and beliefs. Their rehabilitation will have to be completed in the forest only with utmost care.

- 25. Finally, the crux of the problem of rehabilitation is to ensure that in the process of rehabilitation, the displaced persons should not be down compared to their present position. It is, therefore, suggested that the concerned departments should take utmost care while rehabilitating the displaced persons due to Bhopalpattanam project. It is felt that, if all the aforesaid points are taken into account while rehabilitating the displaced persons, will provide as an ideal rehabilitation.
- 26. To provide all the amenities and compensation of the assets etc. must be legally binding on the Government.

 Therefore, all the protections likely to be provided kust be converted into legal provision under law, then only its implementation will have some force and people will feel sure about it. The time schedule for the work of rehabilitation must be prescribed and it must be followed under legal provision.